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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/612,696

07/10/2000

Alan G. Wood

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7590

03/07/2003

STEPHEN A GRATTON
THE LAW OFFICE OF STEVE GRATTON
2764 SOUTH BRAUN WAY
LAKEWOOD, CO 80228

EXAMINER

KARLSEN, ERNEST F

ART UNIT

PAPER NUMBER

2829

DATE MAILED: 03/07/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/612,696

Applicant(s)

WOOD ET AL.

Examiner

Ernest F. Karlsen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 August 2002.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 34-46 is/are pending in the application.
- 4a) Of the above claim(s) 42 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 34-41 and 43-46 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

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The Final Rejection of October 17, 2002 is withdrawn because of an error and the following corrected Final Rejection substituted therefore.

Claim 42 is withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected species, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in Paper No. 5 and 7.

Claims 34-41 and 43-46 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The only portion of the specification that relates to the embodiment of figure 8 is the last 6 lines on page 11 of the specification. No mention of a first plate, a second plate, plastic film, test circuitry, conductive trace, bumps, electrical connector trace, direct electrical path, polyamide, plastic film, die receiving cavity, elastomeric biasing member, compressible elastomeric pad, solder, a connector providing an electrical path independent of the first plate and the second plate, metal, a cavity for retaining the die or the first plate includes a cavity and a spacer member within the cavity is present in the last 6 lines of page 11 of the specification and all of the listed terms are considered to be without basis in the specification. This rejection was applied previously and applicants responded with argument that one of ordinary skill would be able to construct and use the apparatus of figure 8 based on disclosure directed to other figures as set forth in the remarks of the amendment of February 4, 2002. The level of one of ordinary skill in the art seems to be at issue. In attempting to

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establishing adequacy of disclosure applicants maintain that one ordinarily skilled in the art could figure out how to make and use the apparatus of figure 8 from the rest of the disclosure. The examiner maintains that one of ordinary skill in the art would, having been shown a device for testing a one of a wafer or a die, be able to figure out how to adapt the device for testing the other of a wafer or a die especially when told that the device can be adapted to test the other of a wafer or a die. Applicants disagree with such assertion arguing that one of ordinary skill in the art would not be able to do so. It is noted that a wafer might have only one die on it. In such a case implementation would appear pretty straight forward. The examiner maintains one of ordinary skill in the present art would not be able to construct a usable version of figure 8 from the disclosure. Applicants have responded to this rejection by arguing that one of skill in the art could figure out the embodiment of figure 8 from the embodiments of figure 1 and 2. The Examiner maintains that one skilled in the art would not be able to do so because inadequate information is provided for the structure of the embodiment of figure 8. Applicants have also cast the words "directly connected" in their amendments and arguments in a manner which the Examiner feels to be not supported by the original disclosure. The only place the word "directly" appears in the original disclosure is at page 7, line 25. Page 7, lines 24-26, state that the flexible tape is used to directly connect the die to an external connector connected to external test circuitry. It is stated on page 11, lines 28 to 33 that element 147 is an external connector. Thus the flexible tape connects the die directly to the external connector 147. External connector 147 is stated to be connected to external test circuitry but not directly connected to external test

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circuitry. For all anyone knows, there might be an extension cord a mile long between the external connector 147 and the test circuitry.

Claims 31-41 and 43-46 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The only portion of the specification that relates to the embodiments of figure 8 is the last 6 lines on page 11 of the specification and the brief description of figure 8. It is not clear what the parts of figure 8 are or how they are assembled. The arguments with regard to this rejection are basically the same as those of the above rejection set forth in a paragraph above. Also the argument regarding skill level of one of ordinary skill in the art applies.

Claims 31-41 and 43-46 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It is not clear what all the claimed elements are and it is not clear how they are interconnected and interrelated to produce the desired results. The reasons for lack of clarity stem from insufficient disclosure as set forth above. "Directly connected" is new matter.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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Claims 34-41 and 43-46 are, insofar as understood, rejected under 35 U.S.C. 102(b) as being fully anticipated by any one of Kattner et al, Enochs, Jamison et al, Greub et al, Littlebury et al, Malhi et al, Elder et al '850 or Item 32636 of the Research Disclosure No. 326 cited by applicants as Item U.

The test of wafers, die and multichip hybrids are considered equivalent. For support of the above statement see Elder et al '850. Note also that Enochs uses polyamide film. That which is tested by Jamison et al is considered equivalent to a die. Applicants have argued that the above seems to be a combination of references. Equivalents are applicable under 35 U.S.C. 102. Reading claim 34 on Littlebury et al, for instance, would read as follows; Die and wafers are equivalent. Looking at Figure 1 of Littlebury et al, chamber 14 has a top and bottom. The bottom supports element 18 which is a first plate. The top is a second plate. Element 12 is a tape. One end of tape 12 has a connector. "Directly connected" is new matter.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 34-41 and 43-46 are rejected under 35 U.S.C. 103(a) as being unpatentable over any of Kattner et al, Enochs, Jamison et al, Greub et al, Littlebury et al, Malhi et al, Elder et al '850 or Item 32636 of the Research Disclosure No. 326 cited by applicants as Item U.

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It is considered obvious to one of ordinary skill in the art to adapt a device for testing wafers to a device for testing die. A die is merely a part of a wafer and a wafer is just plural dies although a wafer could have only one die and then the wafer and die would be equal. A device is what it is and not what it does, and thus design for chip or wafer test is irrelevant. Even if not irrelevant ample information to establish equivalence exists. The Research Disclosure reference and Elder et al '850 both teach equivalence. Without really knowing if the Research Disclosure reference has a good date it is maintained as a reference. The Research Disclosure reference has decal wiring which is considered the same as printed circuit wiring. The words are different than used by applicants but the concept is the same. The flexible contractor of the Research Disclosure reference is considered equivalent to a tape comprising plastic film. Regarding die, wafers and modules as equivalent, since a device is what it is and not what it does claim 34 can be read on Jamison et al as follows: Element 20 is a first plate. Element 30 is a second plate. Element 50 is a tape and element 55 are connectors.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371© of this title before the invention thereof by the applicant for patent.

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The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claims 34-41 and 43-46 are, insofar as understood, rejected under 35 U.S.C. 102(e) as being fully anticipated by Item 32636 of the Research Disclosure No. 326 cited by applicants as Item U.

The terms used in the Research Disclosure reference are considered the British version of applicant's terms.

The terminal disclaimer filed on August 6, 2002 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of U.S. Patent No. 5,302,891 has been reviewed and is accepted. The terminal disclaimer has been recorded.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period

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will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication should be directed to Ernest F.

Karlsen at telephone number 703-305-4768.

Ernest F. Karlsen

October 21, 2002


ERNEST KARLSEN
PRIMARY EXAMINER